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09/751,785	12/29/2000	Ravi Subramanian	9824-036-999	8773

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EXAMINER

HA, DAC-V

ART UNIT	PAPER NUMBER
2634	7

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/751,785

Applicant(s)

SUBRAMANIAN, RAVI

Examiner

Dac V. Ha

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 15, 19, 20, 23, 26-29, 32, 35** are rejected under 35 U.S.C. 102(b) as being anticipated by Durrant et al. (US 5,659,574) (hereinafter Durrant).

**Regarding claim 15**, Durrant teaches the claimed subject matter as follows.

“at least one multiplier ... code chip” (Figure 14, elements 1029, 1030; Figure 15A, elements 1121, 1123, 1125; Figure 15B, elements 1171, 1172; Col. 22, lines 5-33);

“at least one accumulate ... multiplier; wherein ... been satisfied” (Figure 15B; elements 1175-1178; Col. 22, lines 35-38; Col. 24, lines 57-58).

**Regarding claim 19**, Durrant further teaches the claimed subject matter “an additional ... satisfied” in Figure 15B, elements 1175-1178.

**Regarding claim 20**, Durrant further suggests the teaching of the claimed subject matter “an interface ... statistic” in Figure 15B, element 1182.

**Regarding claim 32**, Durrant teaches the claimed subject matter as follows.

“a radio ... transceiver” (Figure 2; Col. 28, lines 31-58);

“an analog ... transceiver” (Figure 15B, element 1164, 1169);

“a despreader ... satisfied” (Figure 15B, element 1167).

**Regarding claim 23**, see claim 32 above.

**Regarding claim 26**, Durrant further teaches the claimed subject matter “wherein ... protocol” in Col. 1, lines 31-41.

**Regarding claim 27**, see claim 15 above.

**Regarding claim 28**, see claim 19 above.

**Regarding claim 29**, see claim 20 above.

**Regarding claim 35**, see claim 28 above.

**Regarding claim 36**, see claim 20 above.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 39, 54** are rejected under 35 U.S.C. 102(e) as being anticipated by Zhou et al. (US 6,370,130) (hereinafter Zhou).

**Regarding claim 1**, Zhou teaches the claimed subject matter as follows.

“a plurality of data lines ... data types” (Figure 1, elements 11, 12);

“at least one selective coupler ... data lines” Figure 1, element 13k);

“a first multiplier ... dispreading code chip” (Figure 1, element 14k; Figure 20; Col. 5, lines 51-53);

“wherein ... protocols” (Figure 1, element 13k; Col. 5, lines 39-43).

**Regarding claim 54**, the claimed subject matter “wherein the ... spreading factors” is inherent. That is, the symbol period is proportional to the spreading factors.

**Regarding claim 39**, see claim 1 above.

***Claim Rejections - 35 USC § 103***

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 16-18, 21, 22, 30, 33, 34, 37, 38, 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Durrant.

**Regarding claim 16**, the claimed subject matter "wherein ... period" would have been design optional to one skilled in the art.

**Regarding claim 17**, the claimed subject matter "wherein ... period" would have been obvious to one skilled in the art.

**Regarding claim 18**, the claimed subject matter "wherein ... period" would have been design optional to one skilled in the art.

**Regarding claim 21**, the claimed subject matter "a memory ... length" would have been design optional to one skilled in the art.

**Regarding claim 22**, the claimed subject matter "wherein ... despread" would have been design optional to one skilled in the art.

**Regarding claim 30**, the claimed subject matter "wherein ... dump circuit" would have been optional to one skilled in the art.

**Regarding claim 33**, see claim 16 above.

**Regarding claim 34**, see claim 18 above.

**Regarding claim 37**, see claim 30 above.

**Regarding claim 38**, see claim 22 above.

**Regarding claim 47**, see claim 15 above. Further, even though Durrant doesn't explicitly teach the process of obtaining an output from the integrate and dump circuit is repeated, this process is conventional for obtaining the correlation result and would have been understood by one skilled in the art. That is, the multiplication results of the received signal and the locally generated replica PN code are accumulated and dump at the end of each symbol period. The process could have been realized by one skilled in the art using either matched filter or correlator.

6. **Claims 8, 55, 56** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou.

**Regarding claim 8**, the claimed subject matter "a memory ... data sample" would have been optional to one skilled in the art.

**Regarding claim 55**, Zhou suggests the teaching of "wherein ... modulation schemes" in Col. 8, lines 50-51.

**Regarding claim 56**, the claimed subject matter "wherein ... schemes" would have been optional to one skilled in the art.

7. **Claims 2-6, 40-46, 48-53** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou in view of Agrawal et al. (US 6,363,108).

**Regarding claim 2**, Zhou further teaches:

"an in-phase ... quadrature data sample" (Figure 1, elements 11, 12; Col. 5, lines 25-37);

Zhou further suggests the teaching of “a quadrature-phase code ... to the first multiplier” as follows. Zhou teaches that the in-phase and quadrature-phase input are selectively inputted to the matched filter via selector 13K. The function of the matched filter or a correlator is widely known in the art for providing correlation result between the received signal and the local generated replica code (i.e. PN code). Zhou doesn't teach the matched filter in detail, however, a person of ordinary skill in the art would have understood that the matched filter would have been able to accept both in-phase and quadrature-phase input and their correspondent local generated replica. An example showing such operation shown in Figure 5 of Agrawal et al. (US 6,363,108).

**Regarding claim 3**, Zhou further teaches the claimed subject matter “a first accumulate ... satisfied” in Figure 1, element 14K. Even though Zhou doesn't explicitly teach the process for obtaining an output from the integrate and dump circuit, this process is conventional for obtaining the correlation result and would have been understood by one skilled in the art. That is, the multiplication results of the received signal and the locally generated replica PN code are accumulated and dump at the end of each symbol period. The process could have been realized by one skilled in the art using either matched filter or correlator.

**Regarding claim 4**, the claimed subject matter “a second ... protocols” would have been obvious to one skilled in the art base on the teaching of Zhou.

**Regarding claim 5**, see claim 2 above.

**Regarding claim 6**, see claim 3 above.

**Regarding claim 40**, see claim 2 above.

**Regarding claim 41**, see claim 3 above.

**Regarding claims 51-53**, see claims 54-56.

**Regarding claims 42-46**, see Figure 5 of Agrawal.

**Regarding claims 48-50**, see claims 42-46 above.

8. **Claims 24, 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Durrant in view of Zhou.

**Regarding claim 24**, Durrant teaches all the claimed subject matter in claim 24, as applied to claim 23 above, except for the claimed subject matter "wherein ... operation". However, Zhou teaches such claimed subject matter is known in the art in Figure 1, element 13k; Col. 5, lines 39-47.

**Regarding claim 25**, see claim 8.

9. **Claims 7, 9-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou in view of Agrawal et al. as applied to claim 6 above, and further in view of Durrant.

**Regarding claim 7**, see claim 20 above.

**Regarding claim 9**, see claim 30 above.

**Regarding claims 10-14**, see Figure 15B of Durrant.

#### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang et al. (US 6,266,365) disclose a CDMA Receiver.



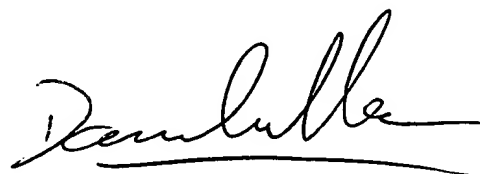
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Gumacos et al. (US 4,583,048) disclose a MSK Digital Demodulator For Burst Communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a horizontal line underneath.

Dac V. Ha  
Examiner  
Art Unit 2634